



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/446,831	02/17/2000	ALOYS WOBEN	7468.178USWO	2960

23552 7590 01/28/2004

MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

LAM, THANH

ART UNIT PAPER NUMBER

2834

DATE MAILED: 01/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/446,831

Applicant(s)

WOBBEN, ALOYS

Examiner

Thanh Lam

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “first width” “second width” “third width” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 17-38 are rejected under 35 U.S.C. 102(b) as being anticipated by Osada et al. (4,851,758).

Regarding claim 17, Osada et al. (figs.1-2) disclose a synchronous generator comprising: a stator having a plurality of windings (24); and a rotor (22) having a plurality of poles (25 and adjacent poles), and , the rotor being movable relative to the stator, the poles defining a plurality of gaps, two or more of the gaps having different widths (pole 25-a and the two adjacent poles as shown in figs. 1-2).

Art Unit: 2834

Regarding claim 18, Osada et al. disclose each pole has a cross-sectional area, and the cross-sectional area of at least one pole is greater than the cross-sectional area of at least one other pole.

Regarding claim 19, Osada et al. disclose the plurality of poles define a plurality of gaps, and at least one of the gaps is wider than at least one of the other gaps.

Regarding claim 20, Osada et al. disclose at least one of the gap has a first width, at least one of the gaps has a second width, and at least one of the gaps has a third width.

Regarding claim 21, Osada et al. disclose the gaps are air gaps.

Regarding claim 22, Osada et al. disclose each of the poles is formed with a pole piece, each pole piece has at least one leading edge, the leading edge extending essentially obliquely with respect to the motion of the rotor.

Regarding claim 23, Osada et al. disclose the leading edge has first and second sections, the first and second sections of the leading edge being oriented at an angle with respect to one another thereby forming a point.

Regarding claim 24, Osada et al. disclose the first and second sections of the leading edge are positioned at an angle between about 1000 and about 140 degree relative to the direction of motion of the rotor.

Regarding claim 25, Osada et al. disclose the first and second sections of the leading edge are positioned at an angle of about 120 degree relative to the direction of motion of the rotor.

Regarding claim 26, Osada et al. disclose each of the pole pieces has at least one trailing edge, the trailing edge extending essentially obliquely with respect to the motion of the rotor.

Art Unit: 2834

Regarding claim 27, Osada et al. disclose the trailing edge has first and second sections, the first section of the trailing edge being substantially parallel to the first section of the leading edge, and the second section of the trailing edge being substantially parallel to the second section of the leading edge.

Regarding claim 28, Osada et al. disclose the leading edge is rounded and the trailing edge is rounded.

Regarding claim 29, Osada et al. disclose the pole piece has a cross-section, the cross-section having a trapezoid shape.

Regarding claim 30, Osada et al. disclose the pole piece has a center portion, a first side portion extending from one side of the center portion, and a second side portion extending from an opposite side of the center portion, the cross-section of the first side portion diminishing as it extends from the center portion, and the cross-section of the second side portion diminishing as it extends from the center portion.

Regarding claim 31, Osada et al. disclose wind power plant comprising a rotor; a drive shaft connected to the rotor (22), and a synchronous generator connected to the drive shaft, the synchronous generator including a stator having a plurality of windings, and a rotor having a plurality of poles, the rotor being movable relative to the stator, the poles being asymmetrically (clearly shown on figs. 1 and 2) positioned on the rotor.

Regarding claim 32, Osada et al. disclose a synchronous generator comprising: a stator having a plurality of windings, and a rotor having a plurality of poles, the rotor being movable relative to the stator, the poles being asymmetrically positioned on the rotor, whereby the distance between adjacent poles is inconsistent (clearly shown on figs. 1 and 2).

Art Unit: 2834

Regarding claim 33, Osada et al. disclose no two gaps have the same width.

Regarding claim 34, Osada et al. disclose a synchronous generator comprising:
a stator having a plurality of windings, and a rotor having a plurality of poles, the rotor being movable relative to the stator, the poles defining a plurality of gaps, wherein at least one of the gap has a first width, at least one of the gaps has a second width, and at least one of the gaps has a third width.

Regarding claim 35, Osada et al. disclose a synchronous generator of claim 34, wherein no two gaps have the same width.

Regarding claim 36, Osada et al. disclose the first width is proximate the second width and less than the second width, and the second width is proximate the third width and less than the third width.

Regarding claim 37, Osada et al. disclose the first width is proximate the second width and greater than the second width, and the second width is proximate the third width and greater than the third width.

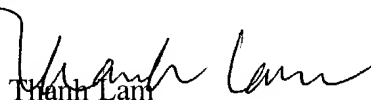
Regarding claim 38, Osada et al. disclose synchronous generator comprising: a stator having a plurality of windings; and a rotor having a plurality of poles, the rotor being movable relative to the stator, the poles having a constant width and defining a plurality of gaps, two or more of the gaps having different widths.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh Lam whose telephone number is (703) 308-7626. The examiner can normally be reached on m-f 9-5.

Art Unit: 2834

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0656.


Thanh Lam
Primary Examiner
Art Unit 2834